



## Benchmarking open government: An open data perspective



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### ABSTRACT

This paper presents a benchmark proposal for the Open Government and its application from the open data perspective using data available on the U.S. government's open data portal ([data.gov](http://data.gov)). The benchmark is developed over the adopted Open Government conceptual model, which describes Open Government through data openness, transparency, participation and collaboration. Resulting in two measures, that is, one known as the e-government openness index (eGovOI) and the other Maturity, the benchmark indicates the progress of government over time, the efficiency of recognizing and implementing new concepts and the willingness of the government to recognize and embrace innovative ideas.

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### 1. Introduction

Emerging from e-business ideas in the late 1990s (Tat-Kei Ho, 2002), e-government was initially viewed as a concept that is focused on exploiting advancement in the information and communication technologies as a means of delivering services (Tambouris, Gorilas, Spanos, Ioannides, & Lopez, 2001). Less than a decade later, e-government has become a key enabler of public sector transformation for effective governance, transparency, accountability and citizen participation in democratic processes and policy making. Because of its enormous benefit to society, citizens and businesses, including faster request processing, reduction in response times, cost reductions, bridging the digital divide, tailoring services to individuals' needs and the active participation of citizens in the government processes (Akman, Yazici, Mishra, & Arifoglu, 2005; Csetenyi, 2000; Gupta & Jana, 2003), e-government has become an important field of scientific research.

E-government is a dynamic entity that is constantly changing and evolving. As part of its evolution, e-government has had a shift in its goals, starting from e-government 1.0 onward. In e-government 1.0, it was important to ensure the four-stage e-government model (Web presence, interaction, transaction and transformation) (Baum & Di Maio, 2000; Seifert, 2003). Later, under the influence of Internet technologies, especially Web 2.0, the e-government 2.0 concept arose. With the intention of reshaping both government operations and citizen interactions with the government (Eggers, 2007), e-government 2.0 became the foremost objective of every government. Its approach was centered on user needs and their inclusion in government.

Approximately in 2009, under the influence of technological, social and demographic evolution together, a new movement in government appeared, with the aim of improving the relationship between the government and the governed and promoting more trustworthy and responsive government. The so-called Open Government (OG) stands for a modern method of governance that provides new space for openness, transparency, and continued dialog between the government and its citizens (Parycek & Sachs, 2010). A new and innovative concept of OG would not be possible without the outcomes created by previous e-government models and the advances made in technology, policy, and culture over the past decade. Furthermore, the penetration of technologies in people's everyday life has made it possible for governments to place the OG idea into practice (Parycek & Sachs, 2010).

Benchmarking e-government is an important part of e-government model evolution. Various e-government benchmarks have been developed and confirmed in practice over the past decade (Sakowicz, 2004; Salem, 2007). These benchmarks are designed to perform quality and quantity assessment of e-government results and to determine whether e-government goals have been satisfied. They cover a broad range of e-government aspects, including the front and back office domains, e-readiness, e-services, online presence, effectiveness, impact, and gain (Bannister, 2007; Jansen, 2005). There is a correlation between e-government benchmarks and e-government evolution stages. Some benchmarks evaluate the goals of e-government 1.0 (Hunter & Jupp, 2001; West, 2001), while others are more oriented toward the evaluation of e-government 2.0 (Capgemini, 2007; Roberts, 2007). Benchmarks that are suitable for Open Government (OG) have not yet been developed, and the existing e-government benchmarks could not be applied. This situation has occurred mainly because there is a difference in the type of data sources used in the previous benchmarks as well as in the government model characteristics. In this article, we will present a benchmark, OpenGovB that was developed for the purpose of qualitative evaluation of OG. Obtaining measurement results and

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knowing the place of a government on an Openness scale could significantly influence a government's developmental path. Not only could government have a general view on its stage of accomplishment but also it could question its development regarding each indicator and have a clear and real insight into its openness, transparency and collaboration level. Benchmark results could point government development toward weak features and thus help to strengthen the relationship between the governments and the governed. Throughout this article, we will explain the benchmark's scope, its indicators and the resulting measures of government openness, the e-government Openness Index (eGovOI) and Maturity. We will apply the OpenGovB from the open data perspective using freely available data from the official U.S. government's open data portal, which is data.gov. Discussion of the results and the OpenGovB model are given at the end of the paper and will provide the reader with a better picture of the significance of this model, its strengths and its weaknesses.

## 2. Open government

The Open Government movement was initiated in 2009, when the president of the United States of America, Barack Obama, issued a Memorandum on Transparency and Open Government that has set "creating an unprecedented level of openness in government" as a primary goal (White House, 2009a). Soon afterward, Obama issued another Memorandum on the Freedom of Information Act, as "the most prominent expression of a profound national commitment to ensuring an open government" (White House, 2009b). These memoranda served as a foundation for issuing the Open Government Directive in December 2009, which has addressed Ministerial departments and agencies through a series of tasks leading toward creating more open government (Orszag, 2009). The Obama Administration has built the OG concept on the ideas of transparency, participation, and collaboration in government. The road toward creating the opportunity for the Open Government to flourish included building the necessary legal environment. McDermott (2010) describes in detail the legal history of OG, starting with "The Paperwork Reduction Act" from 1980 and its journey toward the 2010 Memorandum "Information Collection under the Paperwork Reduction Act", over the "E-government Act" initiated in 2001, and finalizing with "The Freedom of Information Act", which has existed in many versions since 1966. The research notes the extensive openness legal background, emphasizing the effort behind the OG concept development and implementation and setting up a valuable example for others to follow.

Other countries have followed the U.S. government's pioneering initiative for OG and have announced their own ideas that could be directly or indirectly categorized as OG initiatives. For example, the Australian Government 2.0 Taskforce report (Gruen, 2009) defines three key principles for introducing openness and transparency in government: informing, engaging and participating. These principles, which are centered on citizens, tend to lead the government to achieve an informed, connected and democratic community. The government of the United Kingdom has published an action plan for smarter, more efficient government, entitled "Putting the Frontline First: Smarter Government" (Britain & Treasury, 2009). This plan aimed at opening the government and promoting transparency through the following actions: strengthening the role of citizens and civic society, recasting the relationship between the center and the frontline and saving money through sharper delivery (Huijboom & Van den Broek, 2011). In addition to individual government initiatives, there are global efforts for promoting government openness. The Open Government Partnership (OGP) was launched in September 2011 with the aim of committing governments to promote transparency, empower citizens, fight corruption, and harness new technologies to strengthen governance. By the beginning of 2013, the Open Government Partnership welcomed 58 members who were willing to increase governmental openness through embracing

Open Government Declaration, delivering action plans and reporting on their progress (Open Government Partnership, 2012).

In the scope of the mentioned OG initiatives, we can summarize principles that permeate the Open Government idea:

- opening public sector information data and enabling citizens and entrepreneurs to access government-held data in a uniform way (data transparency).
- opening government processes and operations to the public (government transparency).
- explaining decisions and actions to the citizens, acting on requirements expected for the task and accepting responsibility for failure (government accountability).
- engaging citizens in decision making (participation).
- enabling cooperation across different levels of government, between the government and private institutions and between the government and the citizens (collaboration).

### 2.1. The conceptual model of Open Government

One of the reasons that hinder the development of an Open Government benchmark is the lack of OG conceptual clarity. Developing a conceptual model of OG will help us to better understand the Open Government idea and will guide us through the process of defining benchmark indicators for evaluating OG. To adopt such a model, we will argue the existing OG conceptualizations. Obama's three pillars of OG, transparency, participation and collaboration, are being assumed or differently named in the aforementioned OG initiatives around the world. For example, the Australian government principles (informing, engaging and participating) can be directly mapped onto transparency, collaboration and participation. The OGP's goals: transparency, citizens' engagement, fighting corruption and strengthening governance, can be interpreted as transparency, participation and accountability. Thus, the question is: what ideas can we consider as foundations for the OG to enable us to better understand OG, develop indicators for the benchmark model, and grasp the OG character. As observed by Martin (2013), the main issues with the U.S. government's OG concept are that it does not draw a clear boundary between participation and collaboration and that the social media tools and activities that constitute each of them depend on the individual viewpoints. This arrangement is one of the reasons why others suggest a different set of pillars as the foundation of the OG concept, namely, participation, accountability and transparency (Martin, 2013; Open Government Standards, 2012).

It is obvious that all OG models are centered on three pillars. Two of the pillars repeat themselves, namely, transparency and participation, while collaboration and accountability are being used interchangeably. Although some argue that it is not clear whether the participation is collaborative or the collaboration is participatory, they are debating about the tools that should be used to strengthen these OG dimensions (Martin, 2013); at the same time, we can see the imaginary line between the two concepts in the scope of the expressive social media and the collaborative social media definitions. Expressive social media enables people to state their opinions by sharing text, picture video and music with others, while collaboration enables people to join their efforts with government and work together toward achieving a common goal (Kotler, Kartajaya, & Setiawan, 2010). Having these scenarios in mind, we can look at participation as the tool that utilizes the input of the public through expressive social media for the enhancement of policy decisions and government services. Thus, collaboration can be perceived as the engagement of citizens, businesses and government agencies in complex tasks or projects that aim to produce specific outputs (Lee & Kwak, 2011). Accountability is being suggested as one of the foundations of the OG idea (Martin, 2013; Open Government Standards, 2012), but we believe that this suggestion is more an outcome of Open Government. Accountable government is something that could be achieved through the idea of

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